## *CLAIMS*

WHAT IS CLAIMED IS:

1. A bandwidth management apparatus comprising:

a link determining section for determining a link to be used for transmitting communication information of a call when the call is assigned, the communication information being to be transmitted as a sequence of datagrams;

a bandwidth controlling section for judging whether there exists a surplus bandwidth in all sections of the determined link and for allocating said call to a bandwidth necessary for transmitting said communication information when a judgement result is true; and

a call controlling section for informing of said judgement result to a node relating to a call setup for said call.

2. The bandwidth management apparatus according to claim 1, wherein

said bandwidth controlling section cooperates with all or a part of routers provided as nodes in said determined link and updates a bandwidth to be allocated to said call, the bandwidth being included in bandwidths of said determined link.

3. The bandwidth management apparatus according to claim 1, wherein

said bandwidth controlling section judges, at a predetermined frequency, whether successful calls recognized individually persist, and releases a bandwidth used for transmitting communication information of a successful call whose judgement result is false.

4. The bandwidth management apparatus according to claim 1, wherein

said bandwidth controlling section updates a bandwidth preferentially allocated prior to a successful call recognized, to a bandwidth adjusted according to a call setup procedure and necessary for transmitting communication information between an

originating party and a destination party of the successful call.

5. The bandwidth management apparatus according to claim 1, wherein:

said bandwidth controlling section judges whether there exists a surplus bandwidth greater than or equal to a bandwidth in said determined link, the bandwidth being adjusted according to a call setup procedure and necessary for transmitting communication information between an originating party and a destination party of a successful call recognized; and

said call controlling section informs a node of the judgement result, the node relating to a call setup for a successful call which has been judged.

6. The bandwidth management apparatus according to claim 1, wherein

said bandwidth controlling section judges whether there exists a bandwidth in said determined link, the bandwidth being greater than or equal to a bandwidth given according to said call setup procedure and necessary for transmitting said communication information.

7. The bandwidth management apparatus according to claim 1, wherein

said link determining section:

shares routing information exchanged between routers that are provided as nodes in said determined link; and

determines a link to be used for transmitting said communication information, according to said routing information.

8. The bandwidth management apparatus according to claim 1, wherein

said bandwidth controlling section:

updates, in accordance with condition of said determined link, routing information set for all or a part of routers that are provided as nodes in said determined link; and

secures an alternate link.

9. The bandwidth management apparatus according to claim 1, wherein

said bandwidth controlling section estimates said surplus bandwidth of said determined link as a multiple of a bandwidth necessary for transmitting communication information of a single successful call.

10. An address resolution assistance apparatus comprising:

a storage section wherein a pair of a telephone number and an address is stored, the telephone number and address being allocated to a terminal capable of becoming an originating party of a call whose communication information is to be transmitted as a sequence of datagrams; and

an address resolution assistance section for referring to said storage section in a process of call setup for a call of said terminal and for interconverting a telephone number and an address that are allocated to one or both of an originating party and a destination party of the call, wherein

said address resolution assistance section:

obtains one of information representing a link to be used for transmitting communication information of said call and information necessary for determining the link, by cooperating with said originating party; and

informs of the obtained information to a bandwidth management apparatus for managing bandwidth of said link.

11. The address resolution assistance apparatus according to claim 10, wherein

said address resolution assistance section:

inquires one or both of an originating party and a destination party of a successful call assigned about whether the successful call persists, in response to an external request for the successful call; and

informs said bandwidth management apparatus of a result of the inquiry.

12. The address resolution assistance apparatus according to claim 10, wherein

said address resolution assistance section:

inquires one or both of an originating party and a destination party of a successful call assigned about whether the successful call persists; and

informs said bandwidth management apparatus of a result of the inquiry.

13. The address resolution assistance apparatus according to claim 10, wherein

said address resolution assistance section acquires a bandwidth and informs said bandwidth management apparatus of the acquired bandwidth, the bandwidth being determined based on a call setup procedure and being used for transmitting communication information between an originating party and a destination party of a successful call assigned.

14. The address resolution assistance apparatus according to claim 13, wherein

said address resolution assistance section estimates a bandwidth to be used for transmitting communication information, as the number of successful calls.

15. The address resolution assistance apparatus according to claim 10, wherein

said address resolution assistance section:

is given a bandwidth to be used for transmitting communication information of a call, as a part of information necessary for determining a link in said process of call setup for the call; and

informs said bandwidth management apparatus of the given bandwidth.

16. A method for managing a bandwidth, comprising the steps of:

determining a link to be used for transmitting communication information of a call when the call is assigned, the communication information being to be transmitted as a sequence of datagrams;

judging whether there exists a surplus bandwidth in all sections of the determined

link and for allocating said call to a bandwidth necessary for transmitting said communication information when a judgement result is true; and

informing of said judgement result to a node relating to a call setup for said call;

17. The method for managing a bandwidth according to claim 16, comprising the step of judging whether there exists a bandwidth in said determined link, the bandwidth being greater than or equal to a bandwidth given based on a call setup procedure and necessary for the transmitting said communication information.

18. A method for assisting address resolution, comprising the steps of:

interconverting a telephone number and an address allocated to one or both of an originating party and a destination party of a call whose communication information is to be transmitted as a sequence of datagrams, in a process of call setup for the call of a terminal;

obtaining one of a specific piece of information representing a link to be used for transmitting communication information of said call and a specific piece of information necessary for determining the link, by cooperating with said originating party in said process of call setup; and

informing of the obtained specific information to a bandwidth management apparatus for managing a bandwidth of said link.